

WHAT IS CLAIMED IS:

1. A liquid crystal display device comprising:

a liquid crystal display element;

5 a plurality of driving circuits; and

a display control device transmitting display data including an ineffective datum to the plurality of driving circuits,

10 wherein the display control device transmits a datum having a same level as that of an effective display datum being transmitted prior to the ineffective display datum thereby instead of the ineffective display datum during a period when the ineffective display datum should be transmitted thereby.

2. A liquid crystal display device comprising:

15 a liquid crystal display element;

a plurality of driving circuits; and

a display control device transmitting display data including an ineffective datum to the plurality of driving circuits,

20 wherein the display control device transmits a datum having a same level as that of an effective display datum being transmitted subsequently to the ineffective display datum thereby instead of the ineffective display datum during a period when the ineffective display datum should be transmitted thereby.

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3. A liquid crystal display device comprising:  
a liquid crystal display element;  
a plurality of driving circuits; and  
a display control device transmitting display data for

5 odd numbered ones of the plurality of driving circuits and  
display data for even numbered ones thereof alternately  
thereto,

wherein the display control device transmits a datum  
having a same level as that of an effective display datum for  
10 the odd numbered one of the plurality of driving circuits being  
transmitted prior to the ineffective display datum to be  
inputted to an at least one of the even numbered ones thereof  
instead of the ineffective display datum during a period when  
the ineffective display datum should be transmitted to the at  
15 least one of the even numbered ones thereof.

4. A liquid crystal display device comprising:  
a liquid crystal display element;  
a plurality of driving circuits; and  
a display control device transmitting display data for  
20 odd numbered ones of the plurality of driving circuits and  
display data for even numbered ones thereof alternately thereto,

wherein the display control device transmits a datum  
having a same level as that of an effective display datum for  
25 the even numbered one of the plurality of driving circuits being  
transmitted subsequently to the ineffective display datum to  
be inputted to an at least one of the odd numbered ones thereof

instead of the ineffective display datum during a period when the ineffective display datum should be transmitted to the at least one of the odd numbered ones thereof.

5 5. A liquid crystal display device according to claim 3, wherein

the at least one of the odd numbered ones of the plurality of driving circuits has an output terminal thereof being not connected to any signal lines of the liquid crystal display element, and

10 the ineffective display datum is a display datum for an internal circuit being connected to the output terminal.

6. A liquid crystal display device according to claim 4, wherein

15 the at least one of the even numbered ones of the plurality of driving circuits has an output terminal thereof being not connected to any signal lines of the liquid crystal display element, and

the ineffective display datum is a display datum for an internal circuit being connected to the output terminal.

20 7. A liquid crystal display device comprising:

a liquid crystal display element;

a plurality of driving circuits; and

25 a display control device transmitting display data inputted for odd numbered ones of the plurality of driving circuits and display data for even numbered ones thereof alternately thereto,

wherein the display control device has a first storing means for storing display data for the odd numbered ones of the plurality of driving circuits which are inputted from an outside of the liquid crystal display device and a second  
5 storing means for storing display data for the even numbered ones of the plurality of driving circuits which are inputted from an outside of the liquid crystal display device, reads out the display data from the first storing means and the second storing means alternately, and transmits them to the plurality  
10 of driving circuits, and

wherein the display control device transmits an effective display datum for the odd numbered thereof being transmitted prior to an ineffective display datum to be inputted to an at least one of the even numbered ones thereof  
15 instead of the ineffective display datum during a period when the ineffective display datum should be transmitted to the at least one of the even numbered ones thereof.

8. A liquid crystal display device according to claim 7, wherein the display control device detects timing for  
20 transmitting the ineffective display datum and transmits the effective display datum being read out from the first storing means as the ineffective display datum.

9. A liquid crystal display device according to claim 7, wherein the display control device stores the effective display  
25 datum for the odd numbered driving circuit being situated before the ineffective datum in the second storing means, when a display datum to be stored in the second storing means is

ineffective.

10. A liquid crystal display device comprising:

a liquid crystal display element;

a plurality of driving circuits; and

5 a display control device transmitting display data for odd numbered ones of the plurality of driving circuits and display data for even numbered ones thereof alternately thereto,

wherein the display control device has a first storing  
10 means for storing display data for the odd numbered ones of the plurality of driving circuits which are inputted from an outside of the liquid crystal display device and a second storing means for storing display data for the even numbered ones of the plurality of driving circuits which are inputted  
15 from an/the outside of the liquid crystal display device, reads out the display data from the first storing means and the second storing means alternately, and transmits them to the plurality of driving circuits,

wherein the display control device transmits an  
20 effective display datum for the even numbered thereof being transmitted subsequently to an ineffective display datum to be inputted to an at least one of the odd numbered ones thereof instead of the ineffective display datum during a period when the ineffective display datum should be transmitted to the at  
25 least one of the odd numbered ones thereof.

11. A liquid crystal display device according to claim 9, wherein the display control device detects timing for

transmitting the ineffective display datum and transmits the effective display datum being read out from the second storing means as the ineffective display datum.

12. A liquid crystal display device according to claim 10,

5 wherein, the display control device stores the effective display datum for the even numbered driving circuit following the ineffective datum in the first storing means, when a display datum to be stored in the first storing means is ineffective.

13. A liquid crystal display device according to claim 8,

10 wherein In the embodiments of the present invention, the display control device detects transmission timing of the ineffective datum by counting clock signals being transmitted to the plurality of the driving circuits.

14. A liquid crystal display device according to claim 7,

15 wherein the at least one of the plurality of driving circuits has at least one output terminal being not connected to any signal lines of the liquid crystal display element, and the ineffective display datum is a display datum for an internal circuit being connected to the at least one output terminal.

20 15. A liquid crystal display device comprising:

a liquid crystal display element; and

a display control device controlling the liquid crystal display element, wherein the display control device changes an signal input mode thereof in accordance with a number  
25 of the display data in a display timing signals inputted thereto from an outside thereof.

16. A liquid crystal display device according to claim 15,  
wherein the display control device has counting means which  
counts external clock number in the display timing signal,  
discrimination means which discriminates an operation mode  
5 thereof in accordance with the count number counted by the  
counting means, and mode switching means for changing signal  
input mode thereof internally in accordance with  
discrimination result of the discrimination means.